

Trend Study 21-18-97

Study site name: Teeples Ridge .

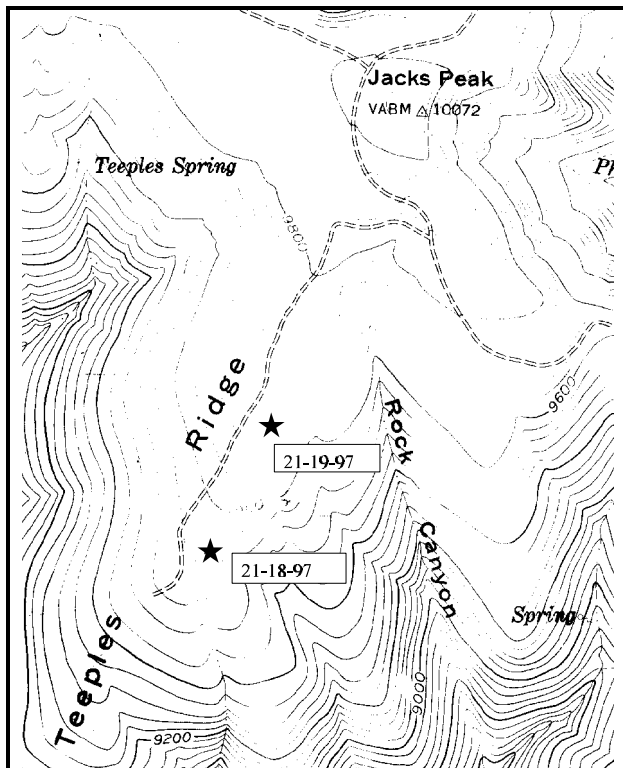
Range type: Perennial Grass/Forb

Compass bearing: frequency baseline 170 M degrees.

Footmark (first frame placement) 5 feet. Frequency belt placement; line 1 (11 & 95ft), line 2 (34ft), line 3 (59ft), line 4 (71ft).

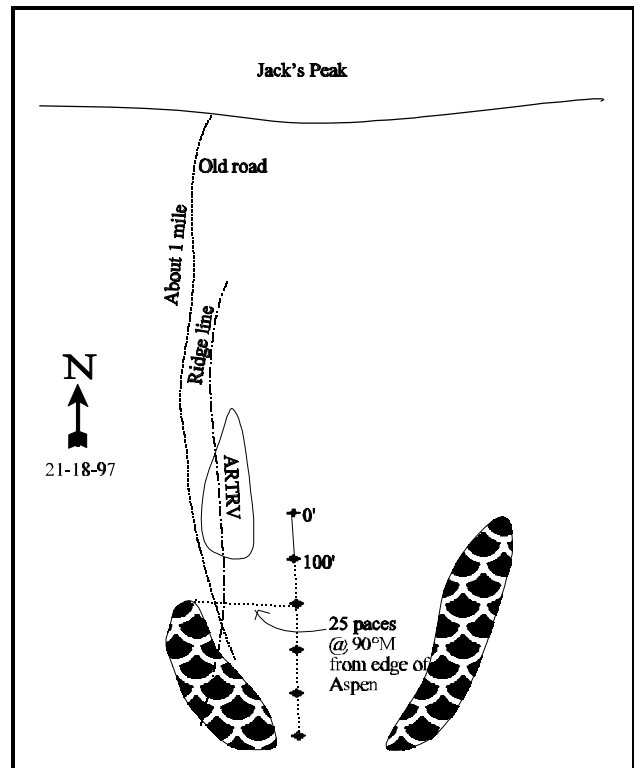
LOCATION DESCRIPTION

From Highway 50 drive 0.75 miles south of mile marker 71 to a road on the right. Drive west 3.7 miles to a cattlegaurd. Go another 0.75 miles across a stream to a gate. Go through the gate and drive 5.55 miles past the weather gauging station to a right turn. Turn right onto road # 096 and go 4.1 miles to a "road closed" sign on the left, just before Jack's Peak. Walk down the old road on the left (which is basically a trail now) for about $3\frac{1}{4}$ miles to the edge of an aspen clone and a clearing on the left. The study is in the clearing. From the north end of the aspen clone walk 25 paces at 90° M to the 200-foot stake. The 0-foot stake is 200 feet north.



Map name: Mount Catherine

Township 21 S, Range 3 W, Section 13



Diagrammatic Sketch

UTM 4315091.151 N, 400637.974 E

DISCUSSION

Study Site No. 21-18

Teeples Ridge is a new site established to monitor cattle and elk competition along Teeples Ridge about a half mile south of Jack's Peak. The site samples a dry meadow type bordered by aspen which provides excellent escape cover for deer and elk. Slope varies from 8% to 15% with a south, southeast aspect. Elevation is approximately 9,500 feet. This area is used by deer, elk, and cattle during the summer. Cattle were grazing on the area when the study was established (8/21/97). Pellet group data show heavy elk and cow use with 61 elk and 50 cow use days/acre estimated. Deer use is estimated at only 2 deer use days/acre. Aspen stands near the site were mostly mature highlined trees with little or no reproduction evident.

Soil on the site is deep and rock free with an effective rooting depth (see methods) estimated at nearly 17 inches. Soil texture is a clay loam with a slightly acid pH (6.4). Soil organic matter is moderate at 3.8%. There is a considerable amount of bare soil estimated at nearly 39%. Herbaceous vegetation and litter cover provide an estimated 72% ground cover. However, erosion is not serious due to the gentle terrain.

Like Pioneer Peak, this site is dominated by grasses and forbs. Sagebrush is found to the north and aspen clones border the site to the east and west. Due to the apparent deep, rock free soil and lack of shrubs, this site also probably once supported a tall forb community. The area was seeded as part of the same watershed protection project that was done at Pioneer Peak. Although browse is not an important aspect of this summer range, a small number of sagebrush were encountered near the start of the baseline. Only 80 plants/acre were estimated.

The herbaceous understory is relatively abundant with seven grasses and 18 forbs producing nearly 31% cover. This kind of site should be producing at least 50% vegetative cover, and it is far below its potential. Smooth brome is the most common grass species providing 71% of the grass cover. The only other common grass is intermediate wheatgrass. Several forbs are abundant including: western yarrow, larkspur, hoary aster, and tuber starwort. These species provide 78% of the forb cover on the site and dominance of these species suggests disturbance caused by heavy grazing.

1997 APPARENT TREND ASSESSMENT

The soil trend appears stable although there is a considerable amount of bare ground. Erosion is not severe due to the lack of slope. Browse is not an important aspect of this summer range and there are only a few sagebrush and low rabbitbrush along the beginning of the baseline. The herbaceous understory is fairly abundant but the composition is poor, especially for forbs. The grass component is dominated by smooth brome and intermediate wheatgrass which account for 98% of the grass cover. Forb composition is dominated by increasers and poisonous species including: western yarrow, larkspur, hoary aster, and tuber starwort. These species occur at high densities and account for 78% of the forb cover. Future herbaceous trends will depend on changes in nested frequency for these increaser species.

HERBACEOUS TRENDS --

Herd unit 21 , Study no: 18

T y p e	Species	Nested Frequency '97	Quadrat Frequency '97	Average Cover % '97
G	Agropyron intermedium	166	55	4.40
G	Agropyron trachycaulum	2	1	.00
G	Bromus carinatus	1	1	.01
G	Bromus inermis	235	63	11.68
G	Dactylis glomerata	20	7	.27
G	Poa pratensis	2	1	.00
G	Stipa lettermani	11	6	.13
Total for Grasses		437	134	16.52
F	Achillea millefolium	36	11	1.09
F	Agoseris glauca	56	24	.49
F	Arabis spp.	12	5	.05
F	Artemisia dracunculus	4	3	.05
F	Aster chilensis	2	1	.00
F	Cirsium spp.	1	1	.03
F	Collomia linearis (a)	52	24	.14
F	Delphinium nuttallianum	67	27	5.99
F	Epilobium paniculatum (a)	8	2	.06
F	Lomatium dissectum	4	2	.01
F	Machaeranthera canescens	166	68	2.81
F	Mentha arvensis	63	25	.80
F	Polygonum douglasii (a)	136	41	.55
F	Rumex crispus	3	2	.18
F	Stellaria jamesiana	174	64	1.00
F	Taraxacum officinale	25	10	.17
F	Vicia americana	32	13	.15
F	Viguiera multiflora	30	9	.41
Total for Forbs		871	332	14.01

BROWSE TRENDS --

Herd unit 21 , Study no: 18

Type	Species	Strip Frequency '97	Average Cover % '97
B	Artemisia tridentata vaseyana	4	-
Total for Browse		4	-

BASIC COVER --

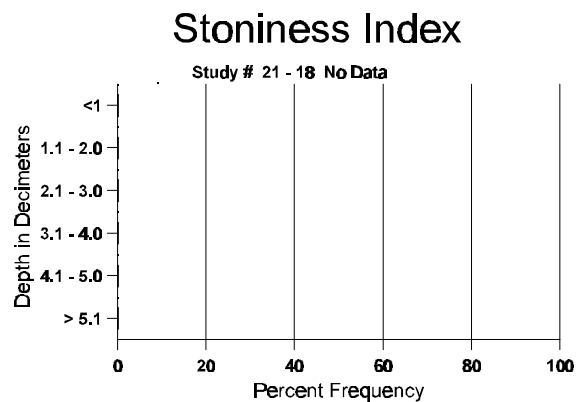
Herd unit 21 , Study no: 18

Cover Type	Nested Frequency '97	Average Cover % '97
Vegetation	431	34.36
Rock	19	.08
Pavement	78	.69
Litter	491	32.06
Bare Ground	460	38.51

SOIL ANALYSIS DATA --

Herd Unit 21, Study no: 18

Effective rooting depth (inches)	Temp °F (depth)	PH	%sand	%silt	%clay	%OM	PPM P	PPM K	dS/m
16.9	47.6 (17.6)	6.4	32.7	28.7	38.6	3.8	18.2	252.8	.6



PELLET GROUP FREQUENCY --

Herd unit 21 , Study no: 18

Type	Quadrat Frequency '97
Elk	9
Deer	2
Cattle	11

BROWSE CHARACTERISTICS --

Herd unit 21 , Study no: 18

A G E	Y R	Form Class (No. of Plants)										Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.	Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Artemisia tridentata vaseyana																		
Y	97	2	-	-	-	-	-	-	-	-	2	-	-	-	40		2	
M	97	2	-	-	-	-	-	-	-	-	2	-	-	-	40	10	9	2
X	97	-	-	-	-	-	-	-	-	-	-	-	-	-	20		1	
% Plants Showing		<u>Moderate Use</u>					<u>Heavy Use</u>					<u>Poor Vigor</u>				<u>%Change</u>		
'97		00%					00%					00%						
Total Plants/Acre (excluding Dead & Seedlings)												'97		80	Dec:	-		